

What is claimed is:

- Sub 827
1. A method for molding large parts, comprising the steps of:
- providing a reinforced plastic melt comprising at least one thermoplastic material and reinforcement particles dispersed within the at least one thermoplastic material, the reinforcement particles comprising less than 15% of a total volume of the plastic melt, at least 50% of the reinforcement particles having a thickness of less than about 20 nanometers, and at least 99% of the reinforcement particles having a thickness of less than about 30 nanometers;
  - communicating a tubular formation of said plastic melt to a mold assembly having a mold cavity defined by mold surfaces, said mold surfaces corresponding to a configuration of the part to be molded, an amount of said plastic melt communicated to said mold assembly being sufficient to form a part having a weight of at least 2 pounds and a total surface area of at least 400 sq. inches;
  - applying pressurized gas to an interior of said tubular formation to expand said tubular formation into conformity with said mold surfaces;
  - solidifying said plastic melt to form said part; and
  - removing said part from said mold assembly.
2. A method according to claim 1, wherein said part comprises a substantially hollow, integrally formed radiator and light support structure for a motor vehicle, said method including

forming a radiator frame portion of said support structure, and forming apertures in said frame portion for securing a motor vehicle radiator to said support structure,

forming a pair of light receiving recesses of said support structure constructed and arranged to mount lights for said motor vehicle, and forming apertures in said recesses for securing said lights to said support structure.

3. A method according to claim 2, wherein said lights comprise headlights.
4. A method according to claim 3, wherein said support structure further include another pair of recesses constructed and arranged to mount parking lights therein.
5. A method according to claim 2, wherein said forming of said apertures in said frame portion is accomplished after said part is removed from said mold assembly.
6. A method according to claim 2, wherein said forming of said apertures in said recesses is accomplished after said part is removed from said mold assembly.
7. A method according to claim 2, further comprising:  
providing a front fascia for a motor vehicle;  
nestingly disposing said support structure with respect to said front fascia.

- Sub B4
8. A method according to claim 1, wherein said part comprises a substantially hollow, bumper for a motor vehicle, said method further comprising:
- mounting said bumper to an exterior of the motor vehicle at an end of the motor vehicle;
  - communicating an interior of said bumper to a fluid consuming component of the motor vehicle; and
  - filling said bumper with fluid to enable said bumper to serve as a fluid reservoir for said fluid consuming component.
9. A method according to claim 8, further comprising provided said bumper with a port for receiving said fluid.
10. A method according to claim 8, wherein said component comprises a windshield wiper fluid spraying assembly.
11. A method according to claim 10; wherein said component comprises a radiator.
12. A method according to claim 10, wherein said bumper comprises two compartments, wherein a first of said compartments is communicated with said windshield wiper spraying assembly, and wherein a second of said compartments is communicated with a radiator.

13. A method according to claim 1, wherein said part comprises a substantially hollow, integrally formed bumper and radiator and light support structure assembly for a motor vehicle, said method including

forming a radiator frame portion of said integrally formed assembly, and forming apertures in said frame portion for securing a motor vehicle radiator to said support structure,

forming a pair of light receiving recesses of said integrally formed assembly constructed and arranged to mount lights for said motor vehicle, and forming apertures in said recesses for securing said lights to said support structure; and

forming a bumper portion of said integrally formed assembly; and

mounting said assembly on the front end of the motor vehicle.

14. In combination in a motor vehicle:

a hollow, sealed bumper constructed and arranged to be mounted on the motor vehicle, said hollow bumper comprising at least one thermoplastic material and reinforcement particles dispersed within the at least one thermoplastic material, the reinforcement particles comprising less than 15% of a total volume of the bumper, at least 50% of the reinforcement particles having a thickness of less than about 20 nanometers, and at least 99% of the reinforcement particles having a thickness of less than about 30 nanometers;

a fluid consuming component constructed and arranged to be mounted on and used by the motor vehicle;

a conduit communicating said fluid consuming component with said hollow bumper, thus permitting said hollow sealed bumper to serve as a fluid reservoir for said fluid consuming component.

15. A substantially hollow, integrally formed bumper and radiator and light support structure assembly for a motor vehicle, and formed from at least one thermoplastic material and reinforcement particles dispersed within the at least one thermoplastic material, the reinforcement particles comprising less than 15% of a total volume of the support structure assembly, and at least 50% of the reinforcement particles having a thickness of less than about 20 nanometers, and at least 99% of the reinforcement particles having a thickness of less than about 30 nanometers; said integrally formed assembly including i) a hollow radiator frame portion, and apertures formed in said frame portion for securing a motor vehicle radiator to said frame portion, ii) a pair of light receiving recesses constructed and arranged to mount lights for said motor vehicle, and apertures formed in said recesses for connecting said lights with an electrical power source, and iii) a hollow bumper portion constructed and arranged to be mounted to a front end of a motor vehicle.
16. A substantially hollow, integrally formed radiator and light support structure for a motor vehicle, comprising a radiator frame portion of said support structure having apertures for securing a motor vehicle radiator to said support structure, and a pair of light receiving recesses of said support structure constructed and arranged to mount lights for said motor vehicle, said recesses having apertures for receiving electrical connecting portions of the lights, said integrally formed radiator and light support structure

